

**TRIGGERS FOCUS GROUP**  
**RECOMMENDATION #4**  
**TRIGGER FOR STORM WATER MONITORING**  
**5 APRIL 2006**

**OBJECTIVE OF STORM WATER MONITORING:** To determine the effects on water quality from agriculture activities caused by storm runoff.

**PROBLEM STATEMENT:** The draft Coalition Group MRP requires that Coalitions sample during two storm events, with the intent of determining the impact of agriculture practices in storm water runoff. The current language for assessment monitoring is described as follows in the draft Coalition Group MRP:

*“Monitoring shall be conducted during the irrigation and storm seasons. The storm season coincides with dormant spray applications. In general, the irrigation season is March through August, but may start as early as February and extend to October. The storm season is December through February, but may include November and March. The MRP Plan shall describe the irrigation and storm seasons, propose specific irrigation and storm season monitoring periods for the region, and discuss when peak irrigation and storm discharges are likely to occur.*

*Monitoring shall include, at a minimum, sampling two major storm events during each storm season, sampling monthly during each irrigation season, and evaluation of data, unless otherwise approved by the Executive Officer. The Coalition Group shall monitor each sampling site for a minimum of two years with a minimum of two samples for all the constituents listed in Table 1 of Section I.F Minimum Analytical Monitoring Requirements each year. If a monitoring site has an exceedance during the two years, the Coalition Group shall continue to sample the monitoring site beyond the initial two years and continue sampling until receiving written approval from the Executive Officer to discontinue sampling at the monitoring site.”*

There are a variety of ways that Coalitions make the decision to collect samples during storm events. Uncertainties exist in selecting the two storm events that may be the most informative with respect to agriculture effects in storm water runoff. Some of the problems that occur with existing storm event monitoring are as follows:

1. Even though rain was predicted in one area of the Coalition, and did occur, some of the monitoring sites did not have sufficient runoff by the time the sampling crews arrived at the site(s).
2. In order to avoid the problem that occurs with #1, a minimum rainfall amount is offered in a Coalition MRP Plan. When the predicted rainfall did not meet certain criteria identified in the MRP Plan sampling was not initiated, although runoff did in fact occur. At times, nNo storm event samples were collected.
3. Two storm *sampling* events were 24 hours apart, effectively sampling the same storm event. These were considered by the discharger to represent two storm events.

4. Some Coalitions are effectively irrigating the crops during times of the year that might be considered 'storm season'. ~~the winter, due to dry conditions, and~~ Irrigation season monitoring should be conducted during that time, rather than storm season monitoring.
5. There is a high level of ambiguity with respect to sample collection as it relates to the timing of winter herbicides on row crops, pesticide spraying on orchards, application of fertilizers or other management practices that might affect storm water runoff.
6. Some water bodies during high-level storm events can increase in flow so greatly that it becomes unsafe for field sampling crews to collect samples.
7. There may be a high degree of uncertainty when making decisions regarding appropriate management practices based on two storm event samples per year is difficult. ~~Variables that affect the uncertainty include the~~ Due to the enormous ~~variety of seasons, size and duration of storm events, timing of storm event in~~ relation to implementation of management practices, and variations in soils and topography, ~~and management practices~~ through the Coalition region. Therefore, the use of best professional judgment is often necessary to select appropriate management practices. ~~Therefore, assessment of management practice effectiveness based on two samples per year will contain a high degree of uncertainty.~~

#### FOCUS GROUP RECOMMENDATION:

Coalitions can select from a variety of options and identify the option(s) in their MRP Plan that will be appropriate for their Coalition as a trigger for storm event monitoring. Some of these choices are listed in the Alternatives Table. Another option for the Coalitions would be to conduct a regularly scheduled and routine monitoring cycle throughout the 12 months of the year that is sufficient to capture information about the impact of agriculture through the storm season as well as the irrigation season. For example, a high frequency of water quality, physical, solid and nutrient monitoring per site (i.e. monthly) could be proposed along with less frequent site measurements for toxicity, pesticides, and metals (i.e., every other month).

Additionally, photo monitoring should always be conducted and submitted as part of the monitoring report. This will help validate instances where rainfall was insufficient to induce runoff, or where the flow increases in the water body were so great that collection of samples was not safe.

#### FOCUS GROUP PROPOSED LANGUAGE:

*The Coalition Group must identify the monitoring frequency and measuring parameters that will be used to evaluate storm event runoff. Table XX (Alternatives Table) provides some suggestions for a monitoring frequency framework that could be used to meet the storm event monitoring objective, such as sampling at first flush, and next storm after agriculture practices occur. This may include developing a routine for monthly monitoring that will occur year round, 12 months of the year. If this routine monthly monitoring is utilized, then during storm seasons, the monthly monitoring will be tied to the first storm event that month. If no storm event occurs, the monthly monitoring shall*

take place at the end of the month. Regardless of approach proposed by the Coalition, significant justification and rationale for the approach must be provided in the Coalition MRP Plan and be approved by the Executive Officer of the Central Valley Water Board. Regardless, photo-monitoring must occur during all sampling events, including sampling events that are aborted, due to lack of flow, or dangerously excessive flow.

*The Coalitions Groups must propose their monitoring schedule that is suited to the individual characteristics (hydrology, topography, soils, etc.) in their MRP Plan.*